

## Species of Concern

NOAA National Marine Fisheries Service

## Warsaw grouper

*Epinephelus nigritus*



Drawing courtesy: C.S. Mannocho.

### KEY INFORMATION

#### Areas of Concern

Western Atlantic: south Atlantic and Gulf of Mexico.

**Year Identified as “Species of Concern”**  
1997

#### Factors for Decline

- Fishing
- Bycatch

#### Conservation Designations

IUCN: Critically Endangered  
American Fisheries Society: Endangered

### Brief Species Description:

Warsaw groupers are classified as deep-water groupers since they inhabit reefs on the continental shelf break in waters 180 to 1700 feet (55 to 525 m) deep. They are characterized by an elongated second spine in the dorsal fin, the rear margin of the caudal fin is convex or truncate with rounded corners, and their pelvic fins are longer than the pectoral fins. They are the only grouper with 10 dorsal spines. They are dark reddish brown or brownish grey to almost black in color dorsally, dull reddish grey below. Juveniles have a yellow caudal fin and a few randomly scattered whitish spots on body. Adults are usually found on rough, rocky bottoms in depths of 180 to 1700 feet (55 to 525 m); juveniles are occasionally seen on jetties and shallow-water reefs. Very little information is available about the reproduction of the warsaw grouper; eggs and larvae are presumed to be [pelagic](#). *E. nigritus* is a protogynous hermaphrodite (changes sex from female to male); age of maturity occurs at 9 years (Parker and Mays 1998). They spawn during August through September in the Gulf of Mexico (SAFMC 2005). The warsaw grouper is long-lived (up to 41 years) and has a slow growth rate (Mannocho and Mason 1987). Maximum size is about 7.7 feet (235 cm) TL and about 440 pounds (200 kg). Their large mouth enables them to engulf prey whole after capturing it in ambush or after a short chase. Diet items include crabs, shrimps, and fishes.

### Rationale for “Species of Concern” Listing:

#### **Demographic and Genetic Diversity Concerns:**

Population size declined sharply in the late 1980s. They aggregate for spawning at specific sites that could be negatively impacted.

#### **Factors for Decline:**

The major threat to the Warsaw grouper is mortality from fishing or [bycatch](#) release mortality (due to barotraumas – pressure change). Fishing is primarily by hook and line and bottom longlines, though the species is caught incidentally in the deepwater snapper/grouper commercial fishery. Almost all of the catch is in the Gulf of Mexico. Warsaw grouper landings saw a 72 percent decline by weight, and a 71 percent decline by numbers from 1988 to 1990 (Figure 1). In addition, NMFS was concerned about the mean weight of warsaw grouper being landed. At about 15 pounds, it was below the minimum weight of an adult warsaw grouper (Timi Jordan, personal communication - NMFS



## Species of Concern

NOAA National Marine Fisheries Service

- NMFS Office of Protected Species).

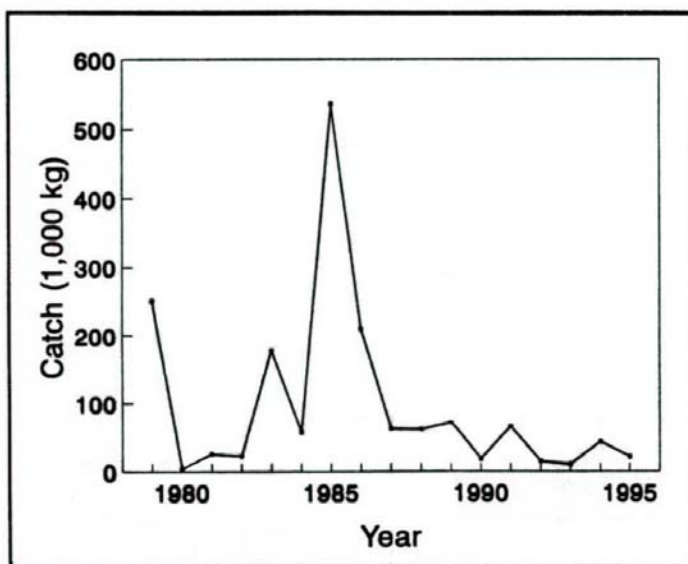


Figure 1. Warsaw grouper catch (kg), all fisheries combined (Parker and Mays 1998).

### Status Reviews/Research Underway:

None.

### Data Deficiencies:

### Existing Protections and Conservation Actions:

Both recreational and commercial fisheries for warsaw grouper are currently regulated in the south Atlantic. The South Atlantic Fisheries Management Council considers the species as overfished and undergoing overfishing. In the Gulf of Mexico commercial fishery, there are no possession limits for the species for federally permitted reef fish vessels; the species is managed under the Deep-water grouper commercial quota. The Gulf of Mexico Fishery Management Council classifies their status as "unknown."

### References:

- FAO Species Identification Guide for Fishery Purposes. 2002. p. 1346 In: K.E. Carpenter (ed). Vol 2: Bony fishes part 1. FAO, Rome.
- Heemstra, P.C. and J.E. Randall. 1993. FAO Species Catalogue. Groupers of the world (Family Serranidae, Subfamily Epinephelinae). An Annotated and illustrated catalogue of the grouper, rockcod, hind, coral grouper and lyretail species known to date. FAO Fisheries Synopsis 16 (125), 382 p.
- Huntsman, G.R., J. Potts, R.W. Mays and D. Vaughan. 1997. Groupers (Serranidae, Epinephelinae): endangered apex predators of reef communities. American Fisheries Society Symposium 23:217-231.
- Manooch, C.S., III. 1984. Fisherman's Guide: Fishes of the Southeastern United States.



## Species of Concern

NOAA National Marine Fisheries Service

Manooch, C.S., III and D.L. Mason. 1987. Age and growth of the warsaw grouper and black grouper from the Southeastern region of the United States. *Northeast Gulf Science* 9:65-75.

Parker, R.O., Jr. and R.W. Mays. 1998. Southeastern United States deepwater reef fish assemblages, habitat characteristics, catches, and life history summaries. NOAA Technical Report NMFS 138.

SAFMC (South Atlantic Fishery Management Council). 2005. Stock Assessment and Fishery Evaluation report for the snapper grouper fishery of the south Atlantic.



Photo credit: US Geological Survey

### **Point(s) of contact for questions or further information:**

For further information on this Species of Concern, or on the Species of Concern Program in general, please contact NMFS, Office of Protected Resources, 1315 East West Highway, Silver Spring, MD 20910, (301) 713-1401, [soc.list@noaa.gov](mailto:soc.list@noaa.gov); or <http://www.nmfs.noaa.gov/pr/species/concern/>, Dr. Stephania Bolden, NMFS, Southeast Region, Protected Resources Division, 9721 Executive Center Drive N., St. Petersburg, FL 33702, (727)570-5312, [Stephania.Bolden@noaa.gov](mailto:Stephania.Bolden@noaa.gov).